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PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

SEP 1 1982

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING SEPTEMBER 3, 1932.

HAVRE:

Since Monday temperatures were rather low. Light showers were recorded on four days. Wind velocity was rather high for the season of the year, being especially noticeable in the afternoon. Rains during the past two weeks were more or less torrential in character, with the result that fallow fields have baked and are now in condition to blow. An extra cultivation will be necessary to break the crust. Corn is filling very well. On some rotations, ears are short. From present appearances there will be quite a range in the yield. Early planted corn is nearly ripe. Sorgo and Sudan grass are heavier than usual.

A light crop of plums and compass cherries were picked during the week. Trees were injured by drought last year. Compass cherries showed the heaviest set. Wild plums are very light. Quality of fruit is much better than for the past two seasons.

Maximum temperature, 84°; minimum, 39°; evaporation, 1.230 inches, wind velocity, 6.9 miles per hour.

JUDITH BASIN:

The weather during the week has been cool and cloudy with considerable rain the first of the week. Snow fell in the neighboring mountain ranges, and some of the higher peaks are still covered. The cold rainy weather has delayed harvest in this section. Seeding of winter wheat has begun. Winter wheat on the rotations is being seeded to-day, Sept. 3. Other work during the week has consisted of seeding winter rye, building fence, cleaning seed, and hauling gravel.

Maximum temperature, 79°; minimum, 35°; precipitation, 0.83 inch.

HUNTLEY:

Cooler weather, with white frosts reported from some nearby farms, occurred during the week. So far as known, the temperatures were not low enough to injure crops. Rainfall early in the week was sufficient to soak up the clods on fall-plowed land and permit fair seed beds to be prepared for winter wheat and rye. All fall-plowed land was given sufficient cultivation to break up the large clods. The surface was left rough enough to withstand blowing and to retard run-off. Measurements were taken on corn and sunflower plots, and the crops were cut.

The Annual Project Fair is being held at the station to-day. Considering the fact that hail destroyed crops on a large part of the Project a week ago, a surprisingly large number of high grade garden and field products are on display. In addition to the crops and domestic arts exhibits, a baby beef and pony show is being held.

Maximum temperature, 89°; minimum, 37°; precipitation, 0.50 inch.

SHERIDAN:

A light shower occurred the first of the week, and the weather for the remainder of the week was much cooler than for several weeks. Frost was reported on low ground around Sheridan, but none was apparent on the station.

The remainder of the corn was harvested the first of the week, except for some late dates of planting and some of the late varieties. Pigs and sheep were weighed. Some of the lambs were hauled to market, and pigs were allowed into corn to hog it off. Threshing was resumed on the 31st and continued for the remainder of the week. Threshing of oats and wheat in the rotations and the

winter wheat varieties was completed. Yields have not been calculated, but the high and low yields in the rotations, and the highest in the winter wheat varieties, were approximately as follows:

		High Yield	Low Yield
Spring wheat	MCC & 570 ..	30.7 bu.	Rot. 48 ... 16 bu.
Oats	Rot. 8	67.8 bu.	Rot.576 ... 37.2 "

Kharkof in variety test
Average 18 plots ..... 44.7 bu.

Maximum temperature, 89°; minimum, 34°; precipitation, 0.57 inch.

DICKINSON:

Siberian millet on the rotations and the millet varieties were cut September 1. Yields of hay were about average. Seed corn was picked on September 2 and 3 from an increase field of Northwestern Dent. Corn is well developed and better matured than usual at this date. Picking of crabs and late varieties of plums was continued.

Maximum temperature, 85°; minimum, 41°; precipitation, 0.41 inch.

MANDAN:

Agronomy: The past week was cool and dry. The small silo was filled early in the week, and the remainder of the corn was cut. Part of the seed corn has been picked. Sorgos and Sudan grass were cut on the 2nd.

The total rainfall for August was 0.70 inch as compared with the 55-year average of 1.85 inches. The total precipitation to the end of August was 13.03 inches as compared with the 55-year average of 13.47 inches.

Maximum temperature, 81°; minimum, 49°; precipitation, 0.53 inch.

Cooperative Grazing Experiment: The gains of the steers for August were near normal and were as follows:

Pasture (Acres)	Steers (Number)	Gains per head August (Pounds)	Gains per head 105 days (Pounds)
100	10	48	285.0
70	10	54	290.0
50	10 *	43	286.0
30	10	4.0	233.0
70 (Rot.) **	14	27.9	264.3
28 (Brome)	10	29.5	256.5

* Steers received two pounds of cottonseed cake per head daily.
** Steers moved to new division the middle of August.

Arboriculture: Seed of chokecherry and buffaloberry has been washed and stratified. A number of willow stumps in the main windbreak and discarded testing blocks have been pulled and hauled away.

ARCHER:

Precipitation totaling 0.29 inch occurred August 27 and 28. Since then the weather has been cool and dry. A high wind swept this section August 30. The average velocity between 7 a.m. and 1 p.m. was 36 miles per hour. The average velocity from 1 p.m. to 5 p.m. was 30 miles per hour. The wind subsided about 4 p.m.

Corn and potatoes are maturing very rapidly, but the yields of these crops will be very light. In the station garden, not enough potatoes have set on for station use. The Great Northern beans are ready to harvest.

Station work has consisted of pulling up silage, preparing the rotation plots for seeding winter wheat, and seeding rates and varieties of winter wheat.

Director W.L.Quayle, University of Wyoming, and E.A.Lundgren, Division of Barberry Eradication, were station visitors.

Maximum temperature, 82°; minimum, 36°; precipitation, 0.29 inch.

AKRON:

The weather turned sharply cool the latter part of last week and has remained cool all during this week. Work consisted of harvesting millet, fodder corn, and sunflowers; seeding winter wheat and the smut nursery; harvesting beans and soybeans; and fall working plots.

A number of farmers who have recently moved into this section visited the station during the week and spent considerable time consulting records and results and talking over methods and crops. On Friday evening a group of Boy Scouts visited the station. After a short tour of the experiments and grounds, in which real interest was shown in the methods of handling the experiments, the equipment, etc., a picnic was held on the grounds.

Maximum temperature, 90°; minimum, 47°; precipitation, 0.50 inch.

NORTH PLATTE: (Report for the two weeks ending September 3, 1932.)

Weather has continued dry and generally warm. August precipitation on the table was 1.40 inches, which is 0.99 below normal. There is very little available moisture in cropped land, and the outlook for fall-seeded grain is very unfavorable. Small grain yields are summarized below:

Crop	Previous crop or treatment. Small grain	Corn	Fallow
Winter wheat	0	0	0
Spring wheat	4.3	6.9	25.5
Oats	10.7	15.1	40.9
Barley	4.0	3.3	29.0
Rye	.8	.7	17.5

All corn plots were harvested with the corn binder during the week. Those receiving the heaviest hail damage were difficult to handle and will make very low yields. Potatoes were harvested September 2. Total yields ranged from 45.7 bushels on disked oat stubble to 190.5 bushels on fallow. The yield on fallow was slightly more than double the average yield on cropped land. The only previous year in which this occurred was 1926.

COLBY:

The week was dry, but cool. The evenings were especially chilly. On Wednesday night the temperature went down to 40. On Tuesday and to-day it was very windy. The drying up of all crops continues. Most of the corn is dried up. On fallow the sorghums are heading and are still green. On the continuously cropped plots they are only partially headed and are drying badly.

Dr. Leighty visited the station on Thursday.

Maximum temperature, 95°; minimum, 40°; precipitation, none.

Climatic summary for August: Precipitation, 1.03 inches; 45-year average, 2.29 inches. Total to date, 1932, 13.07 inches; 45-year average, 14.21 inches.

GARDEN CITY:

Some cultivation of plots in the wheat seed-bed work was done the past week, such as listing, ridge busting, and double disking of listed plots that had previously been cut down. Ground is getting dry and hard, though it turns up moist when worked to any depth. Many sorghum plots are beyond all possible chances of staging any recover from beneficial rains. Milo and kafir following row crops is very poor. Some plots on fallow will produce good yields. Rains in this locality have been very spotted this summer.

About two weeks ago roadways were seeded to wheat. Germination was good and some of it began coming through until the ground was crusted by a rain of 0.51 inch on August 24. The wheat came up to this crust and began turning over. A harrow was used on the 30th to break the crust. At this time

the wheat is coming through very well and gives promise of producing a fair stand. The same condition happened to the plots that were seeded on the project last year and very poor stands resulted. It is interesting to know that when this crusted condition exists under field conditions, harrowing the ground will break the crust and enable the wheat to come through and make a very fair stand if the harrowing operation is not delayed too long.

Maximum temperature, 93; minimum, 42; precipitation, none.

HAYS:

The weather during the week has been changeable the first part dry, hot and windy. Rain on the night of the 30th in the amount of 1.36 inches relieved the drought and heat, so the last part of the week was very pleasant. The rain was spotted having been the result of numerous small clouds that floated over during a 12-hour period. On the experiment station the measurements varied from 0.80 inch on the soil erosion project to 1.50 inches at the station buildings. However, the rain was just what was needed to finish making the sorghum crops.

Work during the week consisted largely in a continuation of road and drainage ditch repairs, a small amount of tillage, and clipping of weeds on some of the plots.

Dr.C.E.Leighty arrived Thursday night and is spending a few days on the station.

Maximum temperature, 89°; minimum, 48°; precipitation, 1.36 inches.

TUCUMCARI:

Rain totaling 1.11 inches the night of August 28 was of great benefit to firing sorghums but came too late to aid cowpeas. Kafir should continue normal growth, but milo was fired so severely that yields in most cases will be low. Work of the week included preparing the land and seeding wheat and rye, pulling broomcorn, and final cultivation of rowed alfalfa.

Temperatures have dropped materially since the rain, resembling early October the past few days.

Visitors included Messrs. Chilcott and Burton of the Woodward Station; J.R.Horton, Bureau of Entomology; and J.H.Martin, Cereal Crops and Diseases.

Maximum temperature, 83°; minimum, 51°; precipitation, 1.11 inches; precipitation for the year to date, 12.91 inches; evaporation, 1.628 inches.

DALHART:

A rain of 0.69 inch Sunday night relieved the drought for a few days only. The sorghums are again showing a decided lack of available moisture. Cowpeas on increase fields were harvested during the week. Estimates on yields of cowpeas are for one-half of the average production. Seed production is as high as usual, but vine growth was held to a minimum. Soy-beans in the nurseries will probably give yields comparable to the adaptability of the variety. This has not been true of the results the preceding three years.

E.F.Chilcott visited the station this week.

Maximum temperature, 89°; minimum, 45°; precipitation, 0.69 inch; evaporation, 1.790 inches; wind velocity, 7.2 miles per hour.

BIG SPRING:

The 60-day drought, which has prevailed here, was broken on the night of August 30 with a rain of 3.95 inches. This was a slow, steady rain, which thoroughly soaked the soil, and caused only a minimum of run-off and washing. This rain has continued intermittently for the past three days until this

morning when the amount for the week totaled 4.40 inches. This will be very beneficial to most crops on the station. Some of the early dates had matured prematurely with reduced yields, but all of the cotton and most of the sorghums are now assured of maturing good yields as far as moisture is concerned.

Station work has consisted of putting concrete foundations under water troughs and repairing fences in the feed lots. A short second cutting of Sudan grass was mowed in the plots and in a increase field the day before the rain. It is probable that this cannot be saved, but a good third crop should now be obtained. Other work has consisted of repairing machinery and doing some painting.

J.H.Martin, Cereal Crops and Diseases, visited the station Aug.30 & 31.

Maximum temperature, 91°; minimum, 64°; precipitation, 4.40 inches.

LAWTON:

A week of cloudy weather and 2.70 inches of rainfall thoroughly soaked the soil, the fourth cutting of alfalfa, and 45 plots of grain sorghum heads that were lying on the ground. The sorghum heads had been on the ground for more than a week previous to the rains, and intensive effort to get them sufficiently dry enough for threshing were futile. To prevent a total loss of the yield records of these sorghums, the wet, muddy, sprouted heads were weighed and 10 pound samples were taken from each plot for drying and threshing. As soon as the moisture content and the shelling percentage are determined, plot yield calculations can be made with a fair degree of accuracy.

Vegetation of all kinds presents a rank vigorous growth. Native grass, trees, and ornamental shrubs, usually showing the effects of hot, dry weather, are in prime condition. Cotton that was planted April 15 and May 1 will produce a comparatively light crop, but fruiting on the May 15, June 1 and 15 plantings increased with each successive date. The last two dates are especially heavily loaded with squares and small bolls. Foliage is heavy and a top growth is developing, especially on the earlier plantings. A rather late fall will be necessary to bring the late plantings to normal maturity. The heavy foliage will also interfere to some extent with the first picking of early matured bolls. The early plantings, April 15 and May 1, reached the peak blooming period in July and early August during a period of heat and drought that resulted in heavy abortion of squares and small bolls. The later plantings bloomed under more favorable conditions with a subsequent increase in the number of bolls set.

A new John Deere rod weeder was used with considerable success early in the week on land that is being prepared for fall seeding of small grains. Soil penetration was much better than was anticipated and elimination of weeds was quite thorough.

Dr.J.H.Martin visited the station August 27 and 28.

The total precipitation of 4.98 inches in August exceeded the monthly normal by 2.09 inches and brought the total for the year to date to 1.11 inches above normal.

WOODWARD:

The total rainfall for August was 4.98 inches. Most of this came in lingering showers and at a time when it was best suited to benefit late-planted sorghums. Due also to rains putting land in condition to work, much of it over the country is being put in good condition for planting wheat.

A trip of 800 miles made westward from Woodward through Boise City, Raton, Tucumcari, Dalhart, and Amarillo indicates that there will be a very short crop of the sorghums and that there is little hope generally over

the region of getting rain enough to plant wheat with the hope of paying yields.

As a result of the fine weather conditions many of the summer flowering plants are continuing to bloom later than usual, giving the station a very attractive appearance.

Work of the week has consisted largely in preparing for Field Day, working roads, and harvesting some of the earlier planted sorghums.

Maximum temperature, 93; minimum, 57; precipitation, 0.64 inch.

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SEP 10 1932

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REPORT FOR THE WEEK ENDING SEPTEMBER 10, 1932.

HAVRE:

Conditions were excellent for threshing and combining until the morning of the 8th. About 10 a.m. the wind began causing some damage to fallow. This was due in part to the crust caused by recent torrential rains. Some of the fallow in a larger field on the station began moving but was in part controlled by cultivating during the wind. The fallow in this field was partly plowed, partly one-wayed, and partly duckfooted for the first operation in the spring. Later cultivations were with a rotary rod weeder. The plowed fallow was sufficiently cloudy so that it did not crust, but the portions that were one-wayed and duckfooted both blew readily. There was very little stubble on this field last year, so this did not protect the land that was not plowed. The evaporation on this day was 0.496 inch, the highest of the season. There was only one other day this year with evaporation more than 0.400 inch. Corn is being husked while standing. It is nearly mature. Corn is ready for hogging down. Third cutting irrigated alfalfa is being cut.

Maximum temperature, 90°; minimum, 44°; precipitation, 0.43 inch, recorded on the 8th and 9th.

JUDITH BASIN:

The weather during the forepart of the week was warm and ideal for completing harvesting operations which were delayed by the cold, rainy weather of last week. Harvesting is still in progress in a few places in this section. The latter part of the week was cool and windy with 0.58 inch precipitation on the 9th. High winds prevailed the 8th and 9th, and considerable soil drifting was visible on the 8th from summer-fallowed fields recently tilled or seeded.

Work on the station during the week has consisted of seeding, building fence, and hauling gravel.

R.E.Wall, Montana Experiment Sta., was a station visitor during the week.

Maximum temperature, 89°; minimum, 40°; precipitation, 0.58 inch.

HUNTLEY:

Corn harvest and fall plowing were continued to completion during the week. The final tillage was given land to be sown to winter wheat and rye, and the crops were planted. Soybeans in the seed and pasture check plots were pulled and piled. Seeding of fall grains on the dry land farms is well under way. Because of the large acreage of volunteer winter wheat that was allowed to mature, rather than plowing it up and fallowing the land this summer, much of the planting this fall is being done on poorly prepared stubble ground. Very little summer fallowing was done this year.

Maximum temperature, 92°; minimum, 41°; precipitation, 0.24 inch.

SHERIDAN:

Threshing was continued throughout the week except for short periods following light showers. Threshing of small grain was completed with the exception of two loads of barley for feed in Field O. Of the spring wheat varieties, Reward yielded the highest, about 32.4 bushels per acre, which was only slightly more than Marquis and Supreme, but was considerably more than any of the other varieties grown in the test. The highest yielding oat varieties were Gopher and Markton, both varieties yielding at the rate of about 69 bushels per acre. Coast barley yielded at the rate of about 53.5 bushels per acre, between 4 and 5 bushels more than Vaughn and Trebi, the next highest yielding varieties in the test.

A heavy windstorm struck the station late in the afternoon of the 8th. Corn shocks, which it was thought were tied securely, were lifted from the ground and badly scattered. Corn bundles from adjoining plots were so badly mixed that it is doubtful if they can be separated to be sure of accurate weights.

Maximum temperature, 94°; minimum, 39°; precipitation, 0.46 inch.

DICKINSON:

Corn on the rotations was cut September 9 and 10. The grain was better matured than usual at this date. Yields of grain will probably be above average, but fodder yields will be about average because the corn was very short. The silo was filled during the week. The yield of silage was around 3.5 tons per acre. The high proportion of grain to stover made a rich silage.

Messrs. Rishworth and Skinner, Bismarck, of the State Board of Administration, visited the station September 7, and J.E.Norton, of Moccasin, Montana, on September 10.

Maximum temperature, 95°; minimum, 36°; precipitation, 0.01 inch.

MANDAN:

Agronomy: The past week has been favorable for all field work. The week was cool and dry. Seed corn has been picked. A good supply of seed was secured. Fall plowing has been started, but the soil is very dry. Fall listing was completed.

Maximum temperature, 94°; minimum, 40°; precipitation, 0.01 inch.

Cooperative Grazing Experiment: The steers are still on the 30-acre pasture, but they will soon have to be moved as they are getting very short of feed. They have made practically no gain for over a month.

Arboriculture: Work during the past week has consisted of removing dead wood from the various tree plantings on the station. Most of this dead wood has been accumulating for several years. An effort is now being made to get it all removed in order to secure more accurate data on 'killing back'.

Visitors for the week included: R.L.Shotwell,Bureau of Entomology, Bozeman, Mont., and J.E.Norton, Moccasin, Montana.

BELLE FOURCHE:

The weather during most of the week has been unusually warm for this time of the year, but the last two days have been quite cool. A rain of 0.20 inch was received the night of September 9, and the sky still remains overcast and threatening. A high wind occurred the evening of Sept. 8, which did considerable damage to hay stacks, trees, and tree fruits. Corn and sorgo have ripened rapidly during the week, and about two-thirds of the plots on the dry-land field have been harvested.

B.A.Spencer,Animal Husbandry, was a visitor early in the week.

Maximum temperature, 95°; minimum, 44°; precipitation, 0.20 inch.

ARCHER:

During the past week the weather has been dry and warm, except the last two days which have been cool. The wind velocity has been very low, not enough to supply power for pumping.

The corn, beans, and potatoes are nearly mature, and the varietal seedings of winter wheat are up. The silage corn produced an average yield of 1.3 tons per acre. The 16 acres of sunflowers are being cut. They will produce about four tons per acre. Other work at the station consisted of seeding the winter wheat on the dry-land plots and preparing for the "Corn,

Bean, and Potato Day" which was held Sept. 6.

About 36 farmers visited the station Sept. 6 for the purpose of making a study of the corn, bean, and potato crops. Dean J.A.Hill, Director W.L. Quayle, Dr.G.H.Starr, and Wm.Riedl, University of Wyoming and County Agent E.O.Johnson visited the station during the week.

Maximum temperature, 87°; minimum, 41°; precipitation, none.

AKRON:

Weather for the week was moderate, with no extremes of temperature. Work consisted of harvesting variety and nursery millet, rate-and-spacing corn and Sudan grass, and variety beans; and cultivating orchard and shelter-belt trees. Although no winter wheat (with the exception of the first of the rate-and-date experiment) has been seeded at this station as yet, some winter wheat seeded by farmers in the vicinity is emerging nicely. Seeding of winter wheat at this station will be held off until next week or the week following.

Dr. and Mrs. V.H.Florell, of the Moscow, Idaho, Cereal Experiment Station, were station visitors on Saturday.

Maximum temperature, 91°; minimum, 43°; precipitation, none.

COLBY:

The long drought was interrupted by a third of an inch of rain last night. It is cloudy to-day. The rain was not enough to wet the soil for wheat seeding, but it will benefit the sorghum crops considerably. All the sorghums except those on summer fallow have dried badly. On most of the plots the milo and sorgo are only partially headed, due to the dry weather.

Among the visitors this week were Dr.J.H.Parker, Professors, H.H. Laude, A.L.Clapp, C.O.Grandfield, Manhattan; Supt.Stinson of Tribune; and Dr. J.H.Martin.

Maximum temperature, 96°; minimum, 46°; precipitation, .33 inch.

GARDEN CITY:

Late listing, one-waying, and plowing was done the past week in the wheat seed-bed work. Ground is very hard and dry. Row crops not on fallow or following wheat on early prepared land are practical failures. It is getting so dry that wheat seeded in the roadways about August 20 is dead or nearly so. Corn is drying up and will be ready to cut in a few days. Feterita is ripe enough to bind. One broomcorn plot in the duplicate seedbed work is a failure. Farmers are seeding wheat, though very little wheat is up yet. This is another fall like last year, when false wire worm is likely to cause considerable damage to wheat seeded in dry soil.

Dr.C.E.Leighty visited the station on Sept. 5 and 6. He left the afternoon of the 6th for Woodward, and other southern stations. Other visitors the past week were: A.L.Hallsted, Hays, Kans., J.H.Martin, Cereal Crops and Diseases, R.O.Snelling, Lawton, Okla., Dr.Parker, H.H.Laude, C.O.Grandfield, and A.L.Clapp, of the Kansas Experiment Station.

Maximum temperature, 95°; minimum, 52°; precipitation, none.

HAYS:

Generally the weather has been quite favorable for the development of feed crops. A little rain would help to round out good yields. Corn is beginning to dent, with little better than average grain yields in prospect. Milo, except on fallow, is about two feet high and practically all dead from milo disease. On fallow the milo has little if any disease and is extremely thick, due to suckers. The crop is well past the bloom stage, and the yield should be heavy. Kafir has made good fodder growth, but it has suffered from drought injury on the continuously cropped plots, especially on the fall-plowed plots where it is shortest and will produce a low grain yield. On spring-plowed

ground and on listed ground it is considerably better, and on fallow (alternately cropped and fallowed) it is still better. Kafir is good on wheat stubble ground, especially where the ground was fallowed for the wheat, but at this time it appears the best yield will come from plantings made on continuously cropped land where the kafir is always headed and the stalks are left on the ground and worked into the soil. Kafir is past the bloom stage, and the grain is well formed.

Work during the week consisted largely of a continuation of repair work on the drainage ditches, some tillage work for weed destruction, and the making of a number of baskets for sorghum harvesting.

The annual Sorghum Field Day program was held on the station Sept. 8. There were about 400 visitors present, and the interest seemed very good. It was a very satisfactory field day.

Maximum temperature, 96°; minimum, 45°; precipitation, 0.20 inch.

TUCUMCARI:

Temperatures have taken a sudden drop the past week, and autumn seems to have arrived with but little warning. Kafir is maturing normally, milo dried prematurely, and much of the corn promises to make but few ears. Cowpeas in rotations have been hauled. Yields will average about 1,400 pounds per acre, only one plot producing over a ton of cured hay to the acre. Rain would not aid crops materially, but it would be a marked benefit to range land and to trees, lawns, and shrubs. Their deterioration has been rapid the past month.

Work of the week included hauling cowpeas, fencing wheat and rye plots, cultivation of vineyard and tree rows, and experimenting with the sulphur-linseed oil spray as a deterrent to tree girdling by rabbits.

Maximum temperature, 90°; minimum, 52°; evaporation, 1.760 inches; wind velocity, 3.4 miles per hour; precipitation, none. The total precipitation of 12.91 inches for the year to date is only 0.30 inch below the 27-year average, but the distribution has been so unfavorable that most plot yields will be low.

DALHART:

The dry weather continues. All row crops are now showing pronounced drying. The early seeded sorghums are drying to maturity. The later seeded row crops are failing to head fully. A rain now would not help the early seeded crops and would possibly delay the maturity of those plots which have not fully headed. Some cowpeas from increase and variety plots were put in the mow during the week. Broomcorn pulling and grape picking was continued. The milo-disease nursery and the soybean nursery are going to give some valuable results this year. Yields of crops on farms will be lower than last year, with some fields a complete failure due to drought.

Dr. J.H.Martin spent three days on the station the first of the week going over the cereal cooperative work. Hon. Marvin Jones was a station visitor during the week.

Maximum temperature, 90°; minimum, 49°; precipitation, none; evaporation, 1.739 inches; wind velocity, 3.9 miles per hour.

BIG SPRING:

The past week has continued rainy and cloudy until to-day, when the sun has been shining all day. The total rainfall for the month to date is 1.84 inches received on five days; this added to 4.68 inches, which was received during the last three days of August, totals 6.52 inches for the past two weeks. This excessive precipitation, together with such an extended

period of cloudy weather, has caused much early harvested feed to mold in the shock. Considerable damage has also been done to mature milo standing in the fields. The lower half of the heads have molded, and the upper sides have sprouted even though the stalks were standing erect. This condition is rather unusual for this section. A considerable number of sorghum varieties are now mature and will be harvested as soon as the binder can get into the fields. Station work has consisted of making baskets for sorghum heads from the plots and hauling dirt on the roads. The bagged heads from a number of the sorghum varieties were gathered for seed during the week.

Maximum temperature, 82°; minimum, 55°; precipitation, 1.54 inches.

LAWTON:

During thd past week of cool and cloudy weather, the maximum temperatures ranged from 82 to 87 and the minimum temperatures from 54 to 68. September weather presents a very decided contrast to the devastating heat and drought that prevailed a year ago.

The fields were too wet to permit cultivation and cotton picking the first half of the week, and the latter half was devoted to the Comanche County 4-H Club fair and farm picnic, held on the station September 8 and 9. Exhibits listed by the club members included 57 entries of field crops, vegetables, and fruits, and 89 head of livestock and poultry. Thirty-nine girls entered 201 quarts of canned fruits and vegetables. The girls also exhibited 48 clothing entries, 45 entries in home improvement, and 17 entries in food preparation. Farm women in the adult clubs entered 116 quarts of fruits and vegetables and 16 clothing exhibits. In view of the fact that ribbons representing first, second, and third places constituted the only awards to the winners, the display was a very creditable one.

On the 9th, Clarence Roberts, Editor of the Oklahoma Farmer Stockman, and Mrs. Lola Clark Pearson, Editor of the "Good Cheer in the Home" column in that paper, talked to a group of about 300 farm men and women.

The cotton boll weevil is causing considerable farm complaint throughout the county. Late summer and early fall weather has been decidedly favorable to the development of this insect, and damage, especially on bottom land fields, where vegetative growth is rank, is of considerable importance. Local gins have received slightly more than 300 bales to date and local prices are quoted at 7 to 7½ cents per pound.

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OCT 1 1902
BUREAU OF
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

SEP 17 '08

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REPORT FOR THE WEEK ENDING SEPTEMBER 17, 1932.

HAVRE:

With no precipitation during the week, conditions were fairly favorable for field operations. Field work was confined principally to the husking of standing corn and harvesting of third-cutting alfalfa. Hogs were turned into the field of Gehu corn in the hogging down corn test. Grasshoppers are causing some damage to fall rye that was seeded about a month ago. They are also eating alfalfa and causing some damage to late-seeded alfalfa.

The maximum temperature ranged from 68° to 81° and the minimum from 35° to 50°. The total evaporation for the week was 1.293 inches. Wind velocity on the 13th averaged 10 miles, which is rather high for this season. Light frosts were reported in certain sections the night of the 15th.

JUDITH BASIN:

The weather continues favorable for field work, and seeding winter wheat, harvesting, and other operations of this season of the year are progressing rapidly. Winter wheat and rye seeded two weeks ago has emerged with good stands. Grasshoppers, although not so numerous as a month ago, are doing some damage. Poisoned bran mash was scattered on all fall seedings during the week. The acreage of winter wheat being seeded in this section is somewhat larger than in past years and is going into the ground in better condition. Rotation corn was harvested during the week. Yields will be lighter than for several years on account of insect and hail damage.

R.Tootell,Montana Experiment Station, was a visitor during the week.

Maximum temperature, 80°; minimum, 35°; precipitation, none.

HUNTLEY:

Weather ideal for field work has prevailed throughout the week. The final seeding for the season was completed, and a start was made in cutting the third crop of alfalfa. Corn was husked from some of the miscellaneous plots. Several cool nights during the week have hastened the maturity of crops still in the field. Although frost temperatures were not recorded at the instrument shelter, squash, pumpkin, and tomato vines appear to be slightly frosted.

Maximum temperature, 84°; minimum, 34°; precipitation, none.

SHERIDAN:

The weather continued dry and quite warm during the day, but with cool nights. Threshing was continued, the remainder of the barley, millet for seed, proso varieties, a part of the flax varieties, and crested wheatgrass being threshed. The small Sterling thresher was used for threshing the crested wheatgrass, and this machine handled it nicely.

Land was prepared for fall seeding, and all fall seedings, including winter wheat in the rotations and varieties, and rye in the rotations, pastures, and varieties, were completed except for the late dates of seeding.

Mr. Babb, Cheyenne Station, arrived at the station on the 15th and has been here since taking notes on the vegetable crops.

Maximum temperature, 86°; minimum, 36°; precipitation, .01 inch.

MANDAN:

Agronomy: The past week was favorable for all field work. The weather remained cool and dry. Fall plowing continued throughout the week. The soil is so dry and hard that plowing is slow and difficult. Winter rye and winter wheat were seeded on the 16th. There is little chance of the grain coming up before a rain. A light frost occurred on the night of the 12th. The temperature did not go below 35°.

Maximum temperature, 82°; minimum, 35°; precipitation, none.

Cooperative Grazing Experiment: The steers in the larger pastures appear to be doing well. The 30-acre steers have not been moved to the reserve pasture yet. They have made no gain for over a month. Brome-grass made no fall growth this year.

Horticulture: Fruit picking was finished during the week. There was a very good crop of nearly all plum and crab varieties. A fair crop of apples, especially where top-worked on older trees, has been picked.

Tomatoes in the breeding project staged a surprising comeback after the weather cooled off, and a fair crop has been produced. The last picking will be done during the early part of next week. So far only light frosts have occurred, just enough to touch leaves of vine-crops and tomatoes.

Washing out plum seeds and the making of cuttings of tender bedding plants such as geraniums and coleus, has been in progress the last two days of the week and will be continued until completed.

Visitors: J.R.Parker, R.L.Shotwell, F.A.Morton, and E.J.Hinman, Bureau of Entomology, Bozeman, Montana.

ARDMORE:

The week was characterized by warm days and cool nights. The minimum temperature was below 38° on three nights of the week, but there was no frost. Harvesting of the corn plots was completed during the week. The corn was too short and brittle to harvest with a corn binder. It was husked in the field, and the stalks were cut with a grain binder. In spite of the dry weather and the severe hail damage, the yield of ear corn will probably exceed ten bushels per acre. The sorgo plots and all but one of the fields were cut and shocked. The sorgo did not make a very good recovery after the hail, and the quality of fodder will be very poor. Potatoes and beans appear to be complete failures. The beans that recovered after the hail are just coming into bloom and will ripen no seed. The potatoes appear to have formed no tubers.

Maximum temperature, 90°; minimum, 36°; precipitation, 0.04 inch.

ARCHER:

During the past week the weather has been mild and clear. The 1932 crops are all mature. The winter wheat that has been seeded to date has produced poor stands. The duckfoot fallow has produced the best stands. Rabbits are numerous and present indications are they will cause severe damage to the winter wheat crop at the station.

Work consisted of putting up the last of the silage, cutting the rotation corn plots, cutting the methods and dates-of-seeding corn plots, and to-day the varieties of corn are being cut. The beans, varieties of millets, and early dates of seeding millets were harvested Sept. 13. The rotation oat plots, varieties of spring wheat, winter wheat, oats, and barley have been threshed.

During the afternoon of Sept. 12 H.H.Hansen, Principal of the Burns High School, brought the agricultural students to the station and spent the afternoon judging dairy cattle. Arnold King, U.S.Agricultural Statistician, visited the station on September 16.

Maximum temperature, 86°; minimum, 37°; precipitation, none.

AKRON:

Weather during the week was dry, with only a trace of precipitation. Temperatures were somewhat cooler on the average than previously, but no extremes were recorded. Nursery millet, the proso and hay millet varieties, the remaining rotation corn (the C.C.series plots), the second replication of the forage and grain sorgo experiments, and the silage corn, were harvested. The pit silo is being filled, and the current work is well in hand. The rotation winter wheat has been seeded. Because of the very dry weather, it is not expected to start growth until moisture is received.

H.B.Osland, Wayne Austin, and John L. Spencer, of the Colorado Agricultural College and Experiment Station were visitors during the week.

Maximum temperature, 89°; minimum, 45°; precipitation, trace.

NORTH PLATTE:

Two showers early in the week totaling 0.28 inch furnished the only precipitation for September to date. This moisture was quickly evaporated, and all soil except on fallow is exceedingly dry. Plots being late plowed for wheat are breaking up cloddy. There will be little chance of seed germinating until moisture is received. Winter wheat and rye will be seeded during the coming week.

COLBY:

This has been a cool and showery week. The moisture has not amounted to enough to wet the surface soil deep enough for wheat seeding or to keep the sorghums from continuing to dry up. The corn plots have all been cut, except those left for harvesting by husking in the field. The yield of grain will not be heavy on any of them. The surface-planted plots will yield no grain and very little fodder. The September 15 plowing was done Thursday. Plot M.C.A. was dry, but the two plowed on the new project were fairly moist. Grasshoppers are beginning to be numerous again.

Maximum temperature, 88°; minimum, 44°; precipitation, 0.22 inch.

GARDEN CITY:

Weather continues dry with local rains reported from surrounding communities but no rain of value on the station. Farmers as a rule are not seeding wheat on account of the dry seed bed.

Corn and feterita were cut the past week. No other field work was done on the dry-land project. Work the past week consisted mainly of getting ready for the annual station field days on September 16 and 17. The first day about 75 farmers turned out and spent the afternoon going over various experimental work at the station.

Maximum temperature, 90°; minimum, 51°; precipitation, three showers, 0.14 inch.

HAYS:

A torrential rain amounting to 4.24 inches occurred during the late afternoon of the 10th. Much of the water was lost by run-off and carried with it a large amount of soil from plots and fields where the surface was smooth and free from vegetation, stubble, or rubbish.

Although there was a heavy loss of water by run-off, a sufficient amount entered the ground to keep it too wet for any tillage work during the week. Drainage ditches and roads on the dry-land project which were under repair were badly washed, making it necessary to do considerable more repair work. This storm was accompanied by a very heavy wind which caused lodging of most of the sorghum crops. The dwarf varieties have straightened up, but the taller varieties have only partly recovered and will make a difficult

harvest. Pink kafir is beginning to mature. Perhaps ten per cent of the heads are already mature. Corn is now ready to be harvested, but the ground is still too wet.

On Thursday there were ten agronomists and county agents from Nebraska visiting the experiment station. On Friday a delegation of about 120, of which 90 were farmers and business men and 30 were students from Rooks County, visited the station. They were chiefly interested in the sorghum crops, which are approaching maturity at this time.

The total precipitation for the storm period including Saturday and Sunday was 4.44 inches on the dry-land project. On another part of the experiment station a rain gauge read 5.10 inches. These rains caused Big Creek to overflow the bottom land on the experiment station. It flooded the basements in the lower part of the city of Hays. Water was the highest it has been since 1928, when the crest was one foot higher than it was at this time. Because of high water, Highway No. 1 was blocked to traffic from early Sunday morning to Monday noon.

Maximum temperature, 88°; minimum, 51°; precipitation, 4.24inches.

TUCUMCARI:

With continued warm weather and no precipitation, crops have ripened rapidly the past week. Cowpeas, beans, and broomcorn yields were light, but kafir and milo still give indication of yields approximating those of normal years. Corn made good early growth, but dry weather the past month has been so severe on this crop that grain yields will be exceptionally low.

Visitors of the week included Dr. Leighty and Messrs.Chilcott and Barn

Maximum temperature, 93°; minimum, 56°; precipitation, none; evaporation, 1.836 inches; wind velocity, 4.1 miles per hour.

WOODWARD:

Only 0.14 inch of rainfall has been recorded in three showers during the first half of September. Temperatures have averaged almost as high during this period as for the last half of August, and surface moisture is somewhat depleted. However, the past month of warm, dry weather following the abundance of rainfall received the middle of August has been an ideal condition for maturing sorghum crops. Some high yields are expected at harvest time.

Considerable land was prepared for wheat following the August rains, but top soil is so dry at present that precipitation will be needed before wheat can be seeded and brought up to a stand.

Our annual Field Day was held Saturday, September 10. The weather was ideal, and a crowd of probably 600 to 800 people was present. Following the basket picnic dinner at noon speakers introduced were: Dr. Leighty, Dry Land Agriculture, Washington, D.C., T. S.Thorfinnson, Bureau of Agricultural Economics, Wash.,D.C., and Prof. Earl Weaver, Dairy Department, Okla. A. & M. College, Stillwater, Okla. Considerable interest was shown by farmers and their wives in the many varieties of sorghums and grapes growing on the station; and the women particularly were much interested in the ornamental shrubbery, trees, and flowers.

Station work during the past two weeks consisted of preparing for Field Day, digging Johnson grass, and harvesting cowpeas and alfalfa and sorghum hay. Broomcorn on the Cereal Project was harvested. Land was prepared for wheat, and the tree nursery was cultivated. Alfilaria was planted, and the last of the grapes were picked, except the Last Rose, which is our latest variety.

Maximum temperature, 98°; minimum, 56°; precipitation, 0.06 inch.

OCT 25 1932
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

SEP 24 1957

Not for publication without prior consent of this division.

REPORT FOR THE WEEK ENDING SEPT. 24, 1932.

HAVRE:

The week was typically autumn with no precipitation. There were three days with rather high wind velocity, the 17th, 18th, and 19th, with the hourly velocity ranging from 9.4 on the 17th to 13.9 on the 18th. The average was 7.4 miles for the week. The first frost occurred on the night of the 20th with a minimum temperature of 30°. Such garden plants as cucumbers and tomatoes were partially killed. The frost was not general as some gardens escaped. Evaporation for the week fell to 1.073 inches.

The following table gives the average yields of small grains and flax at this station for the past season:

	Disked corn	Spring plowed	Fall plowed	Fallow	Green manured	Sub-soiled	Listed	Average, all plots
Spring Wheat	25.3	23.3	25.6	27.9	21.9	24.1	28.2	25.5[a] 22.7[b]
Oats	48.8	49.4	53.2	53.9	45.6	41.3	45.6	49.9
Barley	49.3	39.6	40.0	60.0	46.9	40.2	34.0	45.3
Spring Rye	23.0	23.8	33.0	37.5				28.2
Flax	7.2	6.7	5.7		8.5[c]			6.6
Winter Wheat	20.0[d]	16.5[e]	16.5	23.1		14.0	13.0	19.9

(a) 49 plots not including green manure rotations.
(b) 12 plots including green manure rotations.
(c) Sod crop.
(d) All winter wheat killed entirely and was reseeded to spring wheat.
(e) Disked stubble.

Fall plowing is completed. All winter wheat including rotations, varieties, and nurseries is seeded. Corn is picked and the stover is in the shock. In the commercial fields the third cutting of alfalfa was stacked, and with the stacking of some rye hay, haying will be completed. Over 500 tons of alfalfa and grain hay were grown on the station this year. There is some fall plowing yet to be done on the commercial fields. Alfalfa and hay meadows will be irrigated this fall.

JUDITH BASIN:

The first killing frost of the season occurred on September 20, when the temperature dropped to 25°. Conditions have been favorable to the growth of winter wheat, and fields seeded ten days or more ago are looking fine. Grasshopper damage has not been excessive.

The installation of the Montana Power service to the station was completed during the week.

Maximum temperature, 85°; minimum, 25°; precipitation, none.

HUNTLEY:

Showers early in the week were followed by the first killing frosts of the season. Late sorgo was the only field crop to show any extensive injury; but in the gardens, tomatoes, and vine crops were killed and other more hardy plants showed a little damage. The damp and cold weather delayed the drying of hay which was cut a week ago, and much of the crop will be bleached. Fall-sown grains are beginning to come up in spots favored by moisture, but stands are complete on none of the plots as yet. Farmers who planted their wheat in August report fair stands, although in some cases the plants are dying for lack of moisture. The opinion seems to be that the crop will go into the winter in poor condition unless good rains come soon.

Maximum temperature, 84°; minimum, 30°; precipitation, 0.23 inch.

SHERIDAN:

Partly cloudy and unsettled weather prevailed over the most of the week, with one light rain. The remainder of the flax, safflower, and Sudan grass for seed, were threshed, completing the threshing for the season. Corn and corn stover from early varieties and from a part of the rotation field were hauled and weighed, and seed of crested wheatgrass was cleaned. Sheep were weighed and taken off the pastures. No killing frost has occurred yet on the station, but there has been freezing in near by localities.

Maximum temperature, 90°; minimum, 34°; precipitation, 0.55 inch.

MANDAN:

Agronomy: With the exception of some high wind, the past week has been favorable for field work. Fall plowing was completed early in the week. The South field plowed up very rough. Some alfalfa seed was threshed. The seed was from the second crop and was very clean. Corn in the rotations was shredded during the latter part of the week. The yields turned out much higher than was thought possible earlier in the season. The average yield will be near 30 bushels per acre. The last rain of value on this crop was July 4. The temperature was down to 30° during the week, but very little damage was done by frost.

Maximum temperature, 77°; minimum, 30°; precipitation, none.

Cooperative Grazing Experiment: Cattle appear to have been doing well on their pastures, with the exception of those in the 30-acre pasture. The 30-acre steers have been grazing a short pasture for some time, yet they have shown no pronounced loss in weight.

Horticulture: Harvesting of vegetables has been under way during the week. Perishables such as squash, pumpkins, melons, and tomatoes, were all cleaned up; but, owing to the mild weather at present, root-crops and cabbage are still left in the ground. Flower beds were doing exceptionally well until recently, when a light frost nipped the tops of cannas and coleus. So far, geraniums, verbenas, and pansies are unharmed and blossoming freely. The ground is now becoming excessively dry; and grass, shrubbery, and trees about the grounds show signs of suffering. Water will have to be applied to these within the next few days in order to save much replanting in the future.

Arboriculture: Work during the past week has consisted of collecting seed of green ash, boxelder, and buckthorn. The ash seed crop is very heavy this year, and it is hoped to collect sufficient for a three years supply, as the seed crop has been very uncertain during recent years.

BELLE FOURCHE:

Mild fall weather has prevailed throughout the week. Most of the nights have been comparatively warm, but a light frost occurred September 21. A minimum temperature of 35° was actually recorded, but many of the leaves of cucumber, melon, and other tender vine crops were killed. One light shower occurred. The precipitation for September to date is 1.02 inches below normal, and a total of only 0.58 inch precipitation has been received since the middle of August.

Late fall plowing of plots was completed early in the week, and fall-worked winter wheat plots were prepared for seeding. Winter wheat and winter rye were seeded, but the soil is too dry for the grain to germinate, except on summer fallow.

Maximum temperature, 82°; minimum, 35°; precipitation, 0.02 inch.

ARCHER:

During the week the weather has been mild and dry. All crops have been harvested except potatoes. The winter wheat emergence is spotted, even on fallow, and no plants have appeared on other methods of tillage. The last of the threshing is in progress, and the fall plowing on the rotation plots

has been started. The soil is very dry and hard.

Maximum temperature, 85°; minimum, 35°; precipitation, none.

AKRON:

Weather the fore part of the week was mild and sunny. The last three days were marked with chilly, cloudy weather and a steady wind.

Work consisted of completing the filling of the pit silo, seeding the winter wheat variety test, cutting sorgo and Sudan grass, and preparing the cereal nursery for the winter wheat trials. Drilling of winter wheat in the nursery was started near the end of the week.

A Forage Crops Field Day was held on the station grounds Sept. 20. A crowd of about 400 persons, mostly farmers, from 28 towns assembled in the forenoon and were conducted on a tour of the experimental grounds. A picnic at noon was followed by a program of talks by the following: Prof. Alvin Kezer, E.P.Sandsten, Director, Dr. C.A.Lory, President, and H.B.Osland, of the Colorado Agricultural College; and J.F.Brandon, Supt. Classes in agriculture from the Ft. Morgan, Brush, and Akron High Schools attended. A great deal of interest was shown by all the people who were present, and the event was considered a success.

Visitors for the week, other than on Field Day, were Dr. D.W.Robertson, Ft.Collins, and J.H.Martin, Cereals Crops and Diseases.

NORTH PLATTE:

Major activities on the D.L.A. project during the week were seeding of fall grains and shredder husking the corn plots. There has been no precipitation, and it seems unlikely that grain will germinate, even on fallow, until rain is received. Corn yields were low, and the grain was of poor quality. On the basis of 80 pounds of ears per bushel, the average yield of 78 plots was 7.5 bushels per acre. Lowest and highest single plot yields were 1.5 and 20.5 bushels per acre. While it is not possible to isolate the relative amounts of damage resulting from drought and hail, it is estimated that had there been no hail, the average corn yield would probably have been about 15 bushels per acre. Not considering the reduction in quality, the corn yields were probably reduced 50 per-cent by the hail of August 5.

COLBY:

The dry but threatening weather continues. Frequent high winds and occasional high temperatures continue to ripen corn and the sorghums. It looks as though all the sorghums will mature considerably earlier than usual unless a frost kills them soon. The feterita was ripe and was harvested the first of the week. The milo and kafir are practically ripe on most of the plots. The Sumac sorgo seems to be the slowest in ripening this year. A very poor crop of pinto beans was harvested to-day.

All the winter wheat plots, except that following pinto beans, were seeded on the 19th and 20th. There seemed to be enough moisture in the seed bed on the fallow plots to sprout the wheat. On the stubble plots in the new project the seed was falling in moist ground also, but probably will need additional moisture to come up. On the plots where the ground was plowed or otherwise worked after harvest the seed bed was dry. The corn and milo ground was also dry, as were the stubble plots in the old project. The bean plot was planted to-day. The ground was dry.

Grasshoppers are numerous. Poison was spread to help check damage to the wheat as it begins to come up. Grasshoppers are about the only insects that have been at all numerous this season at any time. Last year all kinds of insects were unusually abundant.

Maximum temperature, 95; minimum, 36; precipitation, none.

GARDEN CITY:

The week was cool and cloudy but still no rain. The ground is dry, and sorghums are drying up rather than ripening. Wheat seed-beds are dry. No wheat has been seeded on the station yet. Many farmers are holding off seeding until later or until they get rain. Corn, sorgo, feterita, and broomcorn have been harvested on the dry-land project. Above average yields have been produced by these crops, with the exception of continuous corn. The 17th was the second day of our field or sorghum days on the station this year. A total of about 150 farmers besides vocational agricultural classes attended. Good interest in the station work was shown by the visitors. They were particularly interested in the better tillage practices and combine type sorghums grown on the State project.

Maximum temperature, 98°; minimum, 50°; precipitation, 0.04 inch.

HAYS:

Except for one hot day the temperature has been moderately cool. Heating stoves and furnaces were started during the week to take off the chill of residences and offices. Sorghums are maturing slowly. It will require about another week for Pink kafir to finish properly. Field work has consisted largely of tillage and making final preparations for seeding of winter wheat. Corn was harvested. Seeding of winter wheat will be started early next week.

Maximum temperature, 95°; minimum, 55°.

TUCUMCARI:

Climatic conditions the past week have been extremely varied, the first four days warm, clear, and with high wind movement, and the last three calm, cloudy, and cool. Evaporation the first four days totaled 1.387 inches, but it was only 0.163 inch the last three days, mean temperatures for the two periods were 76° and 54°, respectively.

A slow, drizzling rain, which began early in the morning the 22, has continued without cessation for 54 hours, with total precipitation of 0.97 inch. This brings the total for the month to 1.00 inch and the total for the year to 13.91 inches.

Some kafir rotation plots and late-date grain sorghum variety plots will be benefited by this precipitation, but it is too late to aid the majority of crops in this locality. Station milo is practically mature, and harvest will begin as soon as the weather clears and the surface soil dries sufficiently.

Over the greater portion of the route to Dalhart, Woodward, Garden City, and return the sorghum crop is practically a failure, drought being expecially severe in the Oklahoma Panhandle and along the extreme northern end of Texas.

F.A.Wagner, and Mr.Morgan, Garden City, were visitors this week.

Maximum temperature, 93°; minimum, 51°;
evaporation, 1.550 inches; wind velocity, 6.3 miles per hour.

DALHART: (Report for the two (2) weeks ending September 24, 1932.)

The early maturing grain and forage sorghums have been harvested. Light yields were obtained on all varieties. The ripening was premature on many of them. The dry weather of August and early September has resulted in one of the lightest crops of corn and grain sorghums that this section of the Panhandle has produced in recent years. The dry weather was terminated, temporarily at least, with light drizzling showers the last half of this week. A total of 1.31 inches of precipitation has been recorded for the past three days. Wheat farmers anticipate the early seeding of wheat since the moisture has fallen.

Visitors during the past two weeks have included: C.E.Leighty,E.F. Chilcott,D.R.Burnham,R.O.Snelling,Charlotte Elliott,S.S.Burton,F.A.Wagner, and L.C.Williams.

BIG SPRING: (Report for the two (2) weeks ending September 24, 1932.)

Weather conditions during the week of Sept. 17 were very favorable for field work after two weeks of weather that kept the fields too wet to work. On the 21st hard, dashing rain started at noon and at 5 o'clock 4.42 inches was recorded. These rains have continued intermittently, until at the present writing the records show 6.64 inches for the week and 8.48 inches for the month up to date. Considerable hail damage has been reported to crops a few miles north of the station. A light hail accompanied the first rain at the station, but no damage has been observed.

The sorghums as a whole are developing good heads and should produce better than normal yields. Many of the cowpea varieties and those in the rotations, which were in cocks at the time of the first rain, were hauled during the week. Most of them were molded so badly that the hay was unfit for use.

Considerable cowpea seed was picked, and bagged seed from many of the sorghum varieties was gathered. Many of the first and second dates of grain sorghums and some kafir plots in the rotations were harvested. Other work has consisted of seeding orchard, vineyard, and roadways to wheat as a control measure against soil blowing. Considerable milo was also headed in an increase field.

C.E.Leighty,E.F.Chilcott,and S.S.Burton were station visitors.

Maximum temperature, 94°; minimum, 59°; precipitation, 6.64 inches.

LAWTON: (Report for the two (2) weeks ending September 24, 1932.)

Clear and mostly warm weather during the past two weeks has been very favorable for cultivation and preparation of small grain land, harvest of feed crops, and the maturity and picking of cotton. Cotton on the station plots has matured and opened normally, and the first picking on all rotations, all spacing test plots, the variety test, and the first two plantings in the date test was completed 12 to 16. In the early plantings, April 15, May 1, and May 15, a very appreciable percentage of well matured bolls show Boll weevil injury in one or more locks. In the later plantings, June 1 and 15, the weevils are very sharply reducing the yields. Current observations indicate that only a few bolls on each plant will develop and mature. The Boll weevil will also prevent the development of a late top crop on the early planted cotton.

The first planting of winter oats, made the 15, is emerging, and winter barley planted on the same date is up to a good stand. No rain of consequence has fallen since September 1, and the surface soil is rather dry. An unusually large amount of late planted sorghum crops, principally Feterita and sorgo, noticeable throughout this territory, will likely mature a very liberal supply of feed.

Maximum temperatures varied from 79° to 95°, and the minimum ranged from 56° to 70°. With the exception of two or three days the wind velocity has been quite low.

WOODWARD:

The first part of the week was very dry and windy, but the latter part has been cool and cloudy. A good rain at this time would be welcomed by the farmers who are anxious to plant wheat early for fall pasture. Most farmers in this section are more interested in growing wheat for pasture than for a grain crop, at the present price of wheat.

Station work during the week consisted of harvesting broomcorn, cowpeas, corn, and Sudan grass. Alfalfa and sorghum hay was stacked and sorghums were rogued. Apples were picked, and considerable budding and grafting of shrubbery and miscellaneous planting was accomplished.

H.H.Finnell, Goodwell, Okla., was a visitor during the week.

Maximum temperature, 90°; minimum, 51°; precipitation, 0.07 inch.

(OVER)

N O T E:

Definition of Frost in Atlas of American Agriculture; Part II, Climate; Section I, Frost and the Growing Season, by William Gardner Reed

Definition of Frost - The occurrence of the last frost in spring and the first in fall are especially noted by the observers of the Weather Bureau. Three distinctive frost types, based on degrees of severity, are recognized, namely, "light," "heavy", and "killing." A frost that has no destructive effect, although tender plants and vines in exposed places may be injured, is recorded as "light". The designation "heavy frost" is descriptive of a condition that in itself is more severe than a light frost - that is, the deposit of frost is heavier and the temperature falls to a lower point, although the staple products of a locality are not seriously injured. The term "killing frost" is used to define a frost, or temperature condition, of sufficient severity to be generally destructive to the staple products of the locality. The distinction between the terms "heavy frost" and "killing frost" is one that has reference more to the effect of the frost than to the amount of deposit. Two frosts may appear equally severe so far as the deposit is concerned, yet little damage may be done by one, while the other may be generally destructive to vegetation. In such cases the former is recorded "heavy frost" and the latter "killing frost".

A low temperature condition of sufficient severity to be destructive to vegetation may, in fact often does, occur without an actual deposit of frost, because of cloudiness, or other cause. Such an occurrence is considered equivalent to a "killing frost" because the effect on vegetation is much the same as that occasioned by an actual deposit of frost sufficient to cause destructive effects. It occasionally happens in spring that vegetation has not advanced sufficiently to be injured by frost at the time of its last occurrence, and in the fall the staple crops may have matured before the occurrence of the first killing frost, making it difficult to determine by direct observation the proper killing-frost dates. In such cases the last date in spring on which a temperature of 32°F. was recorded, or the first similar condition in fall, is regarded as the date of the last or the first killing frost. Frosts less severe than killing are in most cases of minor significance to agriculture, although the difference between killing frost and those less severe is often a matter of opinion of individual observers.

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